USGS NSF GRIP Opportunity

USGS Center:	Wetlands and Aquatic Science Center
Project Title:	Habitat resilience to emerging coastal and land use threats
Project Hypothesis or Objectives:	Florida has a high density of species and ecosystems of conservation concern, as well as many threats to the persistence of native species and their habitats, including high human population growth and urbanization, habitat fragmentation, climate change, and sea level rise. Mitigating these threats to promote persistence of intact ecological systems in the twenty-first century will require substantial effort, and collaborative conservation planning on a landscape scale. The Peninsular Florida Landscape Conservation Cooperative (PFLCC) is one of 22 Landscape Conservation Cooperatives across the United States focused on work achieved through state and federal agencies and other organizations for collective action, to produce a combined effort that extends beyond the limits of any individual organization's efforts and capabilities. Working with the PFLCC, this project will work toward identifying 1) habitats that are resilient to environmental change and 2) management actions that can facilitate the viability of wildlife populations under emerging threats. Using existing models that estimate habitat suitability for Florida's imperiled species and projected climate and land use changes, we will determine projected spatial changes to habitats and strategies that maintain connected landscapes for wildlife communities.
Duration:	3-6 months (negotiable)
Internship Location:	Davie (Fort Lauderdale), FL
Area of Discipline:	Ecology Environmental Science
Expected Outcome:	The project will assist a joint DOI, EPA, and NOAA Resilient Lands and Waters Initiative to prepare natural resources for climate change. The intern will gain experience working as part of an interdisciplinary and interagency team to address cutting-edge

	approaches to solve critical issues in natural resource management. USGS will benefit from the spatial analysis support and new ideas and perspectives of the intern to add value to products delivered.
Special skills/training Required:	- Spatial analysis of ecological data using ArcMap - Ability to locate relevant spatial data sources online - Preparing data for analysis - Programming skills using R or SAS to assist with ecological modeling tasks (preferred)
Duties/Responsibilities:	- Working with and understanding existing species habitat models in Florida - GIS analysis of sea level rise (SLR) and land use scenarios and predicting their impacts to habitat of imperiled species - Determining habitat resilience to rapid environmental change and identifying areas where management actions can increase resiliency
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